

Item no.: 3033016



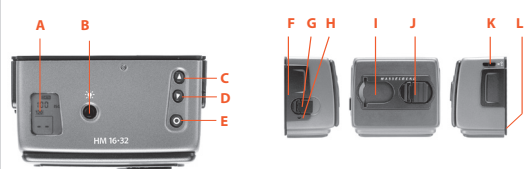
HM 16-32 Film Magazine

The HM 16-32 film magazine is a sophisticated semi-independent unit within the modular H-system. It has its own power supply for individual information storage, LCD panel, illumination, etc.

Much information is transmitted and received between the magazine and the camera body, so ensure the databus connection is kept clean and not damaged in any way. It is advisable to fit the magazine protective cover when storing a film magazine to protect both the databus connection and the darkslide.

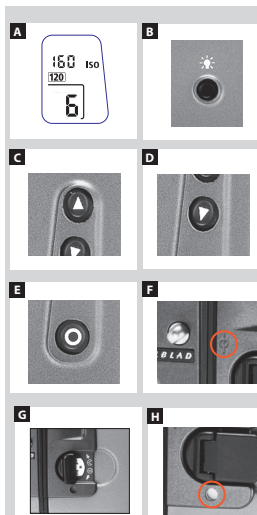
The features include:

- Automatic 120/220 compatibility
- Automatic wind on / wind off
- Automatic film advance
- LCD information panel
- Integral darkslide
- Customizable data imprinting
- Illuminated LCD
- Barcode recognition
- Count-up or count-down film frame reminder choice
- Multi shot option



Parts and components

- | | |
|----------------------------|---------------------------|
| A. LCD panel | G. Darkslide key |
| B. LCD illumination button | H. Darkslide indicator |
| C. Change up button | I. Film tab holder |
| D. Change down button | J. Film holder key |
| E. Function selector | K. Magazine settings lock |
| F. Film plane index | L. Databus interface |



LCD panel

The various functions are accessed by repeatedly pressing the function selector button (loop menu) and changes made by the 'change-up' and 'change-down' buttons. Any settings are automatically saved. At very low temperatures the LCD will require a few seconds to display new settings.

LCD illumination button

The LCD can be illuminated by pressing the display illumination button, which is accessible when the magazine is not attached to the camera. The LCD will remain illuminated all the time you keep the button depressed, up to a maximum of 10 seconds. After 10 seconds has expired, you must release the pressure on the button and press again to obtain a further 10 second period of illumination. Remember that using the illumination function very often will noticeably shorten the life of the battery in the magazine.

When the magazine is attached to the camera, the button on the magazine is inaccessible but you can still illuminate the LCD by pressing the illumination button on the grip instead.

Change up button

Can change the settings 'upwards'. For example, to increase the film speed setting. Toggle action.

Change down button

Can change the settings 'downwards'. For example, to decrease the film speed setting. Toggle action.

Function selector

Selects the four functions that can be set on the magazine. The functions are on a menu loop so that repeated pressing of the selector button will successively access all functions in turn. After a time-out of five seconds of non-activity, the display returns to the main screen.

Film plane index

Provides a measuring point for the actual position of the film plane in the magazine. Used for calculations in critical applications.

Darkslide key

Withdraws and replaces the darkslide. Fold out the key and turn it counter-clockwise 360° (towards the open ∞ symbol) to withdraw it and clockwise 360° (towards the closed \odot symbol) to replace it.

Darkslide indicator

Indicates whether the darkslide is in place or withdrawn:

RED = stop 1 = exposure CANNOT be made
(magazine can be removed from camera)

WHITE = ok 1 = exposure CAN be made
(magazine cannot be removed from camera)

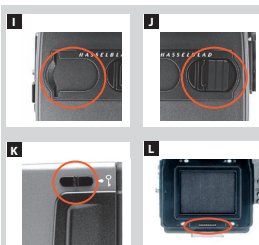
If you attempt to make an exposure when the darkslide is closed, however, you will receive a warning message in the viewfinder and grip LCDs - 'The darkslide is closed'.

Note

Changes can only be made when the settings lock switch is in the unlocked position.

Note

The darkslide can only be withdrawn when the magazine is attached to the camera.



Film tab holder

Holds an ID tab from the film roll pack as a reminder of the type of film loaded. Don't forget to change it if you change film type!

Film holder key

Secures the film holder in the magazine. Fold out the key and turn counter-clockwise 90° to remove the film holder and turn clockwise 90° to lock the film holder in place.

Magazine settings lock

All settings can be locked to avoid inadvertent changes. To change the settings, slide the settings lock (see illus) to the right until it stops. After the changes have been made, slide the settings lock to the left (see symbol on magazine) again to secure the new settings.

Databus interface

Data interface between magazine and camera. Ensure the contacts are kept clean and protected from damage. Keep the protective cover on when the magazine is being stored or transported.

Operation

Battery

The magazine uses a battery to retain information and settings when unattached from the camera. When attached to the camera body, the magazine takes its power requirements from the camera batteries. The magazine battery will normally be effective for 1-2 years depending on use (off camera illumination, for example). When the battery is in a very low condition, (approx. 1 month of use left), a low-battery symbol appears on the magazine LCD as a warning. The magazine will continue to function with no battery power left as long as it remains attached to the camera body. However, when detached, the settings will not be stored.

Battery replacement

Release the film holder by folding out the film holder key and rotating it 90° in a counter-clockwise direction. Withdraw the film holder completely. On the bottom plate on the inside of the film magazine housing you will find a slotted circular battery cover. Insert a small coin or similar into the slot and rotate the cover about 20° in a counter-clockwise direction. The cover will be freed and the battery can be removed. Replace with a fresh CR2032 / 3V lithium (or equivalent) battery. Observe the polarity and ensure the positive (+) face is uppermost and replace the cover (ensure the retaining lugs are inserted in the battery compartment slots), locking it into place by rotating it in a clockwise direction until it stops. If you inadvertently insert the battery incorrectly, the film magazine will not be damaged though it will not function. Try to avoid touching the surface of the battery with your bare fingers as sweat residue can decrease the electrical conductivity of the battery casing and might cause corrosion.

After battery replacement, the magazine's parameters return to the default settings (Barcode, 120, Data-on, Count up).



Attaching and removing the magazine

You cannot remove a magazine from the camera body if the magazine darkslide is not in place, (when the magazine darkslide indicator on the magazine shows white). Neither can you withdraw the magazine darkslide when the magazine is not attached to the camera. Both these restrictions therefore prevent accidental film loss caused by fogging.

Attachment

Position the magazine retention groove onto the magazine support on the camera body ensuring that they are correctly positioned. Swing the magazine towards the camera body and firmly press into place with a click. If there is resistance, the magazine retaining catch on the camera has probably been inadvertently released. In that case, push the release button again to reset the catch.

You can attach and remove the magazine with or without the film holder in place. If you just want to change to a new film, you can remove and reload the film holder without having to remove the whole magazine.

Removal

Ensure that the darkslide indicator on the magazine shows red (signifying that the darkslide is closed). Firstly push the lever of the magazine release button to the right (fig. 4/1) and while maintaining that position press the centre of the button firmly inwards towards the camera body (fig. 4/2) to finally release the magazine.

Note

If the film holder is inadvertently removed mid-film, then exposed frames will naturally be lost due to light fogging. However, if the film holder is re-inserted, the film will automatically be advanced by three frames to position fresh unexposed film. The film counter will also correspondingly add on three frames to the original number recorded before the film holder was removed.

Note

Films without a barcode must have their speed set manually. A manual setting must also be made if you want to override the speed setting of a barcoded film.

Note

You cannot remove a magazine if the darkslide is not closed.

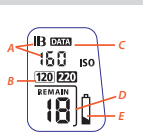
Note

Film settings (ISO / film length) are automatic only if the magazine is set at Barcode automatic. That is, a barcoded film cannot override a manual film speed setting but a manual setting can override the film speed of a barcoded film.

Note

Ensure you press on the centre of the button, not on the lever.

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Magazine settings
Press the frame selector (● button) repeatedly to successively access:

- Film speed (ISO / Bar Code)
- Film length (120/220 / Number of frames)
- Data (on/off)
- Frame counter (count down / count up)
- Low-battery warning symbol

Film speed setting / Barcode
The film speed (ISO / ASA) can be set automatically or manually. Automatic setting uses a Barcode only some films have this feature, notably Fujifilm. This is the default setting.

To access Manual setting:

- Ensure the magazine settings lock is in the unlocked position.
- Press the ● button until a figure (or barcode symbol) appears together with ISO.
- Press either the ○ or the ● button to reach the required setting.
- The new setting will be saved automatically after a time out of five seconds.
- Return the LCD settings lock to the locked position.

Film length/number of frames
Both 120 and 220 films can be used. 120 film will produce 8 (for use with 'half-length' 120 films only) or 16 frames and 220 film will produce 32 frames.

If the film has a barcode, then film length setting (and film speed setting) is automatic. The LCD will automatically show the barcode symbol and the appropriate film length. (Note that film speed can be overridden with barcoded films, but not film length).

If, however, the film has no barcode then proceed as follows:

To access film type setting:

- Ensure the magazine settings lock is in the unlocked position.
- Press the ● button until the 120 or 220 symbol appears.
- Press either the ○ or the ● button to change the desired setting.
- The new setting will be saved automatically after timeout.
- Return the magazine settings lock to the locked position.

Data imprint setting
Data imprinting can be activated or deactivated through the magazine menu.

To access data setting:

- Ensure the magazine settings lock is in the unlocked position.
- Press the ● button until the Data symbol appears.
- Press either the ○ or the ● button to reach On or Off.
- The new setting will be saved automatically after a time out of five seconds.
- Return the magazine settings lock to the locked position.

Note
If you use both standard and barcoded films (or overridden barcoded films), check that you have changed the settings accordingly.

Manual film speed setting.

220 film length setting.

Data imprinting setting.

'Frames remaining' counter setting.

Note
Operation and changes made to the data imprinting function are accessed through the camera menu. Please see separate section in camera User Manual for full details.

Frame counter setting
The frame counter can be set to show either how many unexposed frames remain on a film or how many frames have already been exposed. The LCD shows your choice of setting by adding the word *Remain* as a reminder of the number of frames remaining or 'countdown'. Absence of this word implies the opposite, namely, 'count-up', so it denotes the number of the next frame to be used (for example, the figure 4 means three frames have already been exposed). This information is also automatically displayed on the grip LCD and viewfinder LCD though only as a figure above a symbol.

To access frame counter settings:

- Ensure the magazine settings lock is in the unlocked position.
- Press the ● button until *Remain* appears.
- Press either the ○ button or the ● button to reach the desired setting (toggle function).
- 'on' will show the number of frames remaining on the roll.
- 'off' will show the number of the next frame in the series.
- The new setting will be saved automatically after a time out of five seconds.
- Return the magazine settings lock to the locked position.

Low-battery symbol
The low-battery symbol only appears on the magazine LCD when the battery needs changing.

Example
In the example shown here:

- 120 film length set manually
- the film speed (ISO/ASA) has been set manually
- 5 frames have already been exposed (therefore with regular 120 film, 11 frames remain)
- the battery is functional

Film loading

The film magazine can be loaded either on or off the camera. Regularly check the interior of the magazine and remove dust, particles or any scraps of paper from previous rolls of film. Load and unload film magazines away from direct light sources.

- Fold out the film holder key and turn it counter-clockwise 90°. Withdraw the film holder completely.
- Place an empty take-up spool in the upper spool holder by placing one end over the fixed stud in the holder and the other end underneath the sprung spool retaining arm. Rotate the spool a little if necessary until it clicks into position.
- Completely remove the retaining paper band from a new roll of film and place it in the lower spool holder. See diagram for correct orientation. Ensure you do not place the film spool the wrong way around!
- Pull 8–10 cm (3–4 in.) of paper backing from the film roll and insert the tongue of the backing paper into the slot in the take-up spool. Turn the spool one complete turn to ensure the tongue is firmly held in place by the overlying paper backing.
- Re-insert the film holder into the main body of the film magazine ensuring the correct orientation. Press firmly inwards towards the magazine and pay particular attention to see that both sides are level with the magazine body before turning the film holder key clockwise 90° to lock the film holder in place and fold the key back into its stored position. You might find that increased pressure on the left hand side of the film holder will more easily ensure a positive and correct positioning in the magazine.

If the camera is active or in standby mode the film will be wound automatically by the camera to position the first frame (this function can be changed in Custom Options so that the film is advanced only when the shutter release button is pressed the first time).

Beeper
The beeper sounds immediately after the last-but-one frame has been exposed. This function can be turned off in Custom Options.

Film wind on and off
Wind on: See 'Film wind-on' under Custom Options for a setting choice.
Wind off: When the last frame has been exposed, the film will automatically be wound off. However, to wind off a film sooner, press the film wind off button (fig. 6). Use a ballpoint pen or similar to activate it. You must also confirm the message on the grip LCD (fig. 7) before the film winds off.

Unloading a magazine
To remove a film, remove the film holder in the same manner as when loading a film. Grip the exposed roll of film firmly and remove. Ensure the paper backing is wound tightly and that it is sealed with the band properly (the band may need to be moistened to activate the adhesive depending on type). Store exposed films away from strong light sources and contact with sharp objects. Move the remaining empty spool to the take-up spool compartment.

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